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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 818,092	03 26 2001	Charles Guthrie	2102330-901110	2840

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GARY CARY WARE & FREIDENRICH LLP  
1755 EMBARCADERO ROAD  
PALO ALTO, CA 94303-3340

EXAMINER

LEE, BENNY T

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 06 17 2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

098180-2



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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.

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DATE MAILED:

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire Three (3) month(s), \_\_\_\_\_ days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                  |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449                  | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474      | 6. <input type="checkbox"/> _____   |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-29 are pending in the application.
- Of the above, claims \_\_\_\_\_ are withdrawn from consideration.
2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☒ Claims 1-5, 6-14, 15-23, 24-29 are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. These drawings are: ☐ acceptable;  
☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner, ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved, ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received.
- ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 O.D. 11; 453 O.G. 213.

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The disclosure is objected to because of the following informalities: Page 6, lines 18, 19 note that "0" (number "zero") should be rewritten as --O-- (upper case letter "O"). Page 7, line 16, note that "as previously described" should be moved from it's present location to a location follow "sapphire" in the same line, for clarity. Page 9, lines 16, 20, note that --(see Fig. 4B)-- should follow "60" and "64", respectively. Note that with respect to "Fig. 7", reference labels (20, 22, 24, 34, 36, 38) appearing therein need explicit description relative to Fig. 7.

Appropriate correction is required.

The drawings are objected to because of the following: In Figs. 1, 2, 3, 4B, 5, 6, 7, note that all "ceramic" material should be cross-hatched in the proper manner; In figs. 2, 7, if the upper and lower sections of ceramic material (both currently designated by reference label 22) appear to be "different" materials, then should different reference labels (instead of the common reference label 22) be used instead?. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the antenna, recited in claim 29 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Claims 1-5; 6-14; 15-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 6, 15, note that it is unclear, even in light of the specification, what characterizes "at least largely composed".

In claims 4, 9, note that it is unclear if only "said housing" is formed of "ceramic (or another material)". Moreover, it is unclear how the claimed ceramic housing reconciles with the integrated housing and waveguide as recited in claims 3, 8, from which these claims respectively directly depend.

In claim 14, note that "said other ceramic material" lacks strict antecedent basis.

The following claims have been found objectionable for reasons set forth below:

In claim 3, note that "form" should be rewritten as --provides--.

In claims 2, 9, 15, 16, note that "formed from" should be rephrased as --comprised of--.

In claims 11-14, note that "first-mentioned" should be deleted as being unnecessary.

In claim 23, note that --material-- should follow "same" for consistency.

In claims 24, 27, note that "formed" should be deleted as being unnecessary.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2; 6, 7; 15, 17, 23; 24 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mucklejohn et al.

Mucklejohn et al (fig. 1) discloses a plasma discharge lamp comprising a housing or discharge tube (20) having a fill material (24) disposed therein. A source or RF generator (34) applies RF electromagnetic energy to excite the fill within discharge tube housing (20). The excited fill ionizes into a plasma which in turn emits electromagnetic radiation in the form of visible or infra-red radiation (see abstract, last line), which passes through exposed portion of discharge tube (20). Such exposed portions of the discharge tube inherently function as a "window" since the material thereof (i.e. glass) is transparent to such visible and infra-red radiation. Note from fig. 1, that the RF electromagnetic energy from source or generator (34) is coupled to the discharge tube (20) through a waveguide or launcher (22). The launcher (22) includes an enclosed tubular structure (28, 30, 26) surrounding a portion of the housing or discharge tube. Such enclosed launcher structure inherently functions as a resonant structure having a resonant mode associated therewith. Also disposed within the waveguide or launcher (22) is a dielectric material (40). For example, such dielectric material could include ceramic materials such as glass or quartz (see col. 1n. 55). If glass is the dielectric material (40) such material would then be the same material as that of the discharge tube housing (see col. 2, ln. 7).

Claims 24, 26 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by

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MacLennan et al '936 (e.g. fig. 3) discloses a housing (44), of e.g. alumina, containing a plasma discharge medium or fill (42) therein. The housing (44) includes a window or aperture (48) through which visible light passes through after being emitted by the plasma discharge. As is evident from fig. 1., the above described light emitting structure is inherently disposed in a cylindrical coupling structure 26 (e.g. as a corresponding bulb 30) and excited by electromagnetic energy via magnetron power source (30) to excite the plasma discharge.

Claims 1, 3, 4; 6-9; 15, 18; 24, 27-29 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by MacLennan et al ('443).

MacLennan et al ('443) discloses with respect to Figs. 20, 21, an integrated waveguide and housing structure for an electrodeless lamp. In particular, fig. 20 depicts a ceramic housing (641) which encloses therein a plasma bulb (630). Also associated with the housing (641) is an aperture or window (640). As depicted in Fig. 21, the housing (641) and window (640) are assembled with a ceramic structure (644) of a different ceramic material comprising a "waveguiding" structure (i.e. excitation coil antenna 643) disposed therein. Note that when the housing (641) and ceramic structure (644) are assembled together an "integrated" structure inherently results.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number (703) 308-4902.

